

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F23G5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F23G F23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 925 389 A (MAK KAI K ET AL) 15 May 1990 (1990-05-15)	1,5,10, 14,15, 19,21,28
Y	column 3, line 36 - line 54 column 7, line 11 - column 9, line 19; figures 1,6A,6B	2-4,7
X	EP 0 416 533 A (UNION CARBIDE IND GASES TECH) 13 March 1991 (1991-03-13)  column 3, line 17 - column 7, line 5; figure	1,5,10, 14,15, 21,28
Y	US 5 636 977 A (COLE ROBERT ET AL) 10 June 1997 (1997-06-10) column 1, line 17 - column 5, line 6; figures 1,2	2-4,7
		-/-



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents :

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- \*P\* document published prior to the international filing date but later than the priority date claimed

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\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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\*&\* document member of the same patent family

Date of the actual completion of the International search

10 September 2004

Date of mailing of the International search report

17/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 309 850 A (DOWNS WILLIAM ET AL) 10 May 1994 (1994-05-10) cited in the application the whole document -----	1,14
A	US 6 029 588 A (BAUDHUIN THOMAS J) 29 February 2000 (2000-02-29) cited in the application the whole document -----	1,14

## Information on patent family members

International Application No  
PCT/IB2004/001220

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4925389	A	15-05-1990	US AT CA DE EP MX US	4746290 A 58006 T 1283002 C 3765840 D1 0247894 A2 169187 B 4766822 A	24-05-1988 15-11-1990 16-04-1991 06-12-1990 02-12-1987 24-06-1993 30-08-1988
EP 0416533	A	13-03-1991	US BR CA DE DE EP ES JP JP JP KR	4957050 A 9004364 A 2024556 A1 69017318 D1 69017318 T2 0416533 A1 2068299 T3 2012398 C 3099112 A 7030903 B 9513971 B1	18-09-1990 03-09-1991 06-03-1991 06-04-1995 19-10-1995 13-03-1991 16-04-1995 02-02-1996 24-04-1991 10-04-1995 18-11-1995
US 5636977	A	10-06-1997		NONE	
US 5309850	A	10-05-1994		NONE	
US 6029588	A	29-02-2000	AT AU AU CA CN DE EP ES JP PT RU TW WO US US	253991 T 733598 B2 3456699 A 2327104 A1 1299303 T 69912809 D1 1107833 A1 2211069 T3 2002510550 T 1107833 T 2212583 C2 430728 B 9951367 A1 6216611 B1 2002009399 A1	15-11-2003 17-05-2001 25-10-1999 14-10-1999 13-06-2001 18-12-2003 20-06-2001 01-07-2004 09-04-2002 30-04-2004 20-09-2003 21-04-2001 14-10-1999 17-04-2001 24-01-2002